

ABSTRACT

Peripheral blood leucocytes incubated with a semi-synthetic phage antibody library and fluorochrome-labeled CD3 and CD20 antibodies were used to isolate
5 human single chain Fv antibodies specific for subsets of blood leucocytes by flow cytometry. Isolated phage antibodies showed exclusive binding to the subpopulation used for selection or displayed additional binding to a restricted population of other cells in the mixture. At least two phage antibodies appeared to display hitherto unknown staining patterns of B lineage cells. This approach provides a subtractive
10 procedure to rapidly obtain human antibodies against known and novel surface antigens in their native configuration, expressed on phenotypically defined subpopulations of cells. Importantly, this approach does not depend on immunization procedures or the necessity to repeatedly construct phage antibody libraries.

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